

REMARKS

Claims 12, 13 and 16 have been amended to recite the subject matter recited in claims 19, 20 and 21, respectively. Specifically, claims 12, 13 and 16 recite that the basic inorganic metal compound of component (C) is selected from the group consisting of calcium oxide, magnesium oxide, sodium hydroxide and calcium hydroxide.

Upon entry of the above amendment, claims 12-18 and 22-24 will be all the claims pending in the application.

On page 2 of the Office Action dated December 31, 2003, claims 12, 13, 15, 16, 18 and 22-24 have been rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 2001-91188 to Statz (“Statz ‘188”).

As indicated above, independent claims 12, 13 and 16 have been amended to recite that the basic inorganic metal compound of component (C) is selected from the group consisting of calcium oxide, magnesium oxide, sodium hydroxide and calcium hydroxide. Statz ‘188, however, does not teach or suggest a golf ball with comprising either calcium oxide, magnesium oxide, sodium hydroxide or calcium hydroxide.

Accordingly, Applicants respectfully request that the 35 U.S.C. § 102/103 rejection be reconsidered and withdrawn.

In the third paragraph of page 2 of the Office Action dated December 31, 2003, claims 12, 13, 15, 16 and 18-24 have been rejected under 35 U.S.C. § 103(a) as allegedly being

unpatentable over Statz '188 in view U.S. Patent No. 5,803,831 to Sullivan et al. ("Sullivan '831").

The Examiner concedes that Statz '188 does not teach the use of preferred inorganic cationic sources, *i.e.*, calcium oxide, magnesium oxide, sodium hydroxide or calcium hydroxide. It is asserted, however, that Sullivan '831 lists a number of cation sources for neutralizing ionomers. The Examiner further asserts that it would have obvious to use sodium hydroxide, magnesium oxide, etc. to supply the metal ions called for by Statz '188.

Applicants respectfully assert that the one of ordinary skill in the art would not have been motivated to incorporate the cation sources taught in Sullivan '831 into the thermoplastic elastomers compositions of Statz '188.

Although Sullivan '831 teaches that sodium hydroxide and magnesium oxide may be used to neutralize acid groups, Sullivan '831 does not teach the base resin of either the present invention or the composition of Statz '188. In Statz '188, magnesium hydroxide is used to neutralize the acid groups of the copolymer blend. In addition, Statz '188 generally teaches that "the acid moiety in the ethylene acid compolymer is neutralized by any cation source known in the art." *See* paragraph [46].

Applicants submit that the general teaching of Statz '188 does not provide sufficient motivation to make a *prima facie* case of obviousness. Applicants submit that the Examiner has applied an improper "obvious to try" standard, because the prior art (Statz '188) gives only general guidance as to the particular form of the claimed invention, *i.e.*, the cation source.

In addition, Applicants submit that the Shore D hardness of the embodiments of Sullivan '831, *i.e.*, 69-73 and "brittle" for a composition where sodium hydroxide is the cation source (*see* Table 4), are much higher than the Shore D hardness of the embodiments of Statz '188, *i.e.*, 45-58 (*see* Table 9B). Thus, one of ordinary would not be motivated to incorporate the cation sources of Sullivan '831 into the composition of Statz '188.

Therefore, in view of the foregoing reasons, Applicants submit that the rejection be reconsidered and withdrawn because there would be no motivation to combine reference teachings.

Applicants also assert that the presently-claimed invention possesses unexpectedly superior qualities as compared to the closest prior art.

The use of magnesium oxide, as well as calcium oxide, sodium hydroxide or calcium hydroxide, results in a composition that has a high degree of neutralization and good thermal stability. As demonstrated in the comparison of Example 2 and Comparative Examples 2, 6 and 12 on pages 21-22, compositions without magnesium oxide as a cation source have a much lower degree of neutralization and lower thermal stability.¹

Applicants submit that the comparative examples illustrated in the specification are representative of the closest prior art. With respect to Comparative Example 2, Applicants note that it comprises a magnesium source and, aside from containing no magnesium oxide, has the

¹ In the Examples, thermal stability was measured by weight loss observed using thermogravimetric analysis.

same composition as Example 2. Comparative Examples 6 and 12 contain a magnesium source, as well as recited components A1 and A2, but do not contain magnesium oxide. Applicants have summarized the comparison of Example 2 and Comparative Examples 2, 6 and 12 below. *See also*, Tables 1 and 2 in the Specification.

Example	Degree of Neutralization (mol %)	Weight loss (wt %)
2	88	1.2
Comparative 2	42	1.6
Comparative 6	56	1.8
Comparative 12	45	2.5

Applicants respectfully submit that the foregoing comparison demonstrates that one of ordinary skill in the art would not have expected the degree of neutralization coupled with the thermal stability exhibited by the claimed invention from the prior art.

Accordingly, Applicants request that the Examiner reconsider and withdraw the 35 U.S.C. § 103 rejection.

In the paragraph bridging pages 2 and 3 of the Final Office Action, claims 12-15, 22 and 23 have been rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,100,321 to Chen (“Chen ‘321”).

As discussed above, independent claims 12, 13 and 16 have been amended to recite that the basic inorganic metal compound of component (C) is selected from the group consisting of

calcium oxide, magnesium oxide, sodium hydroxide and calcium hydroxide. Chen '321, however, does not teach or suggest a golf ball with comprising either calcium oxide, magnesium oxide, sodium hydroxide or calcium hydroxide.

Accordingly, Applicants respectfully request that the 35 U.S.C. § 102/103 rejection be reconsidered and withdrawn.

In the second paragraph of page 3 of the Final Office Action , claims 12-15, 22 and 23 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Chen '321 in view of Statz '188.

As discussed above, independent claims 12, 13 and 16 have been amended to recite that the basic inorganic metal compound of component (C) is selected from the group consisting of calcium oxide, magnesium oxide, sodium hydroxide and calcium hydroxide. Furthermore, Chen '321 and Statz '188 do not teach or suggest a golf ball with comprising either calcium oxide, magnesium oxide, sodium hydroxide or calcium hydroxide.

Accordingly, Applicants respectfully request that the 35 U.S.C. § 103 rejection be reconsidered and withdrawn.

In the fifth paragraph of page 3 of the Final Office Action, claims 12-15, 19, 20, 22 and 23 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Chen '321 in view of Statz '188 in further view of Sullivan '831.

Applicants submit that one of ordinary skill in the art would not have been motivated to combine reference teachings in the manner suggested by the Examiner.

Chen '321 is relied on a teaching stearic acid or metal stearates to ethylene/acid/acrylate ionomers to form golf ball cores, mantles, covers or one piece balls. The Examiner asserts that the final product of Chen '321 would be the same final product as produced by the "post neutralization" process of the present invention.

The Examiner has conceded that neither Statz '188 nor Chen '321 teach or suggest a golf ball comprising either calcium oxide, magnesium oxide, sodium hydroxide or calcium hydroxide.

As discussed above, Statz '188 generally teaches that "the acid moiety in the ethylene acid copolymer is neutralized by any cation source known in the art." *See* paragraph [46]. Chen '321, however, contains no such general teaching. Chen '312 teaches metal stearates as the cation source in the composition.

Applicants submit that the general teaching of Statz '188, here used as a secondary reference, does not provide sufficient motivation to make a *prima facie* case of obviousness. Applicants submit that the Examiner has applied an improper "obvious to try" standard, because the prior art (Statz '188) gives only general guidance as to the particular form of the claimed invention, *i.e.*, the cation source. Furthermore, as acknowledged by the Examiner, Chen '321 teaches neutralizing acid groups during the blending of the ionomer resin and the fatty acid. Thus, Applicants submit that Examiner is picking and choosing reference teachings without establishing reasons why one of ordinary skill in the art would motivate the teachings indicated.

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In addition, Applicants submit that the Shore D hardness of the embodiments of Sullivan '831, *i.e.*, 69-73 and brittle for a composition where sodium hydroxide is the cation source (*see* Table 4) are much higher than the Shore D hardness of the embodiments of Statz '188, *i.e.*, 45-58 (*see* Table 9B) and Chen '321, *i.e.*, 54-56 (*see* Table 4). Thus, one of ordinary skill in the art would not be motivated to incorporate the cation sources of Sullivan '831 into the composition of Chen '321.

Therefore, in view of the foregoing reasons, Applicants submit that the rejection be reconsidered and withdrawn because there would be no motivation to combine reference teachings.

Applicants also assert that the presently-claimed invention possesses unexpectedly superior qualities as compared to the closest prior art.

The use of magnesium oxide, as well as calcium oxide, sodium hydroxide or calcium hydroxide, results in a composition that has a high degree of neutralization without the loss of thermal stability. As demonstrated in the comparison of Example 2 and Comparative Examples 2, 6 and 12 on pages 21-22, compositions without magnesium oxide as a cation source have a much lower degree of neutralization and lower thermal stability.²

Applicant submit that the comparative examples illustrated in the specification are representative of the closest prior art, which for the purposes of this rejection is Chen '321. With

² In the Examples, thermal stability was measured by weight loss observed using thermogravimetric analysis.

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respect to Comparative Example 2, Applicants note that it comprises a magnesium source and, aside from containing no magnesium oxide, has the same composition as Example 2.

Comparative Examples 6 and 12 contain a magnesium source, as well as recited components A1 and A2, but do not contain magnesium oxide. These comparative examples all employ a metal stearate, as is taught in Chen '321.

Applicants again present the comparison of Example 2 and Comparative Examples 2, 6 and 12 below.

Example	Degree of Neutralization (mol%)	Weight loss (wt%)
2	88	1.2
Comparative 2	42	1.6
Comparative 6	56	1.8
Comparative 12	45	2.5

Applicants respectfully submit that this comparison clearly demonstrates that one of ordinary skill in the art would not have expected the degree of neutralization and thermal stability exhibited by the claimed invention from the teachings of the prior art, specifically where the prior art teaches that the neutralization of the acid groups is simultaneous to the blending of a resin and a fatty acid.

Accordingly, Applicants request that the Examiner reconsider and withdraw the 35 U.S.C. § 103 rejection.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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